
IODU/C software conversion

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CAUTION WITH ESDS DEVICES

To avoid damaging equipment from electrostatic discharge, wear a properly connected anti-static wrist strap when working on or near Meridian 1 equipment.

Use the procedures in this section if your system is equipped with NT5D61 Input Output Disk Unit with CD-ROM (IODU/C) card(s). If your system is not equipped with the IODU/C card, do not use these procedures.

The procedures in this section describe how to:

- convert one software release to a later release
- perform a software upissue within in the same software release
- add new features
- modify Incremental Software Management (ISM) limits

To better understand the process, read through the entire procedure before you begin.

Parallel reload the 61C/81/81C

Note: This procedure does not include instructions for installing new IODU/C cards. To use this procedure, your system must already be equipped with IODU/C cards.

Use the parallel reload procedures to convert from one software release to a later release or to upissue software within the same software release. These parallel reload procedures are for software conversions only. Do *not* use this procedure for any other purpose. Parallel reloads can be done from either CPU. For the purposes of this document, we begin with CPU 0.

Table 5 on page 33 summarizes the required steps to perform this procedure.

Table 5
Options 61C, 81, 81C parallel reload summary

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Verify memory

Determine whether your system requires additional memory. Refer to "Increasing NT9D19, NT5D10 CP and NT5D03 CP memory" on page 151 for memory requirements and upgrade procedures.

Perform a data dump

- 1 Load the Equipment Data Dump Program (LD 43). At the prompt, enter
LD 43 to load the program
- 2 When "EDD000" appears on the terminal, enter
EDD to begin the data dump
- 3 When "DATABASE BACKUP COMPLETE" or "DATADUMP COMPLETE" appears on the terminal, enter



CAUTION

Loss of Data

If the data dump is not successful, do not continue; contact your technical support organization. A data dump problem must be corrected before proceeding.

to exit the program

STAT the hardware

- 1 Load LD 137 and get status of the hard disks.
Note: Be sure the hard disks are synchronized. If not, synchronize before proceeding.

LD 137

STAT	Get the status of the hard disks
SYNC	Synchronize hard disks if necessary. Synchronization may take up to 50 minutes
TEST CMDU	Performs hard and floppy disk test.
****	exit program

- 2 Load LD 135 and get status of the CPs, CNIs and memories.

LD 135

STAT CPU	Get the status of both CPs and memory
STAT CNI	Get the status of all configured CNIs

- 3 Test the standby (inactive) CP. Then switch CPs, and test again.

TEST CPU Test standby (inactive) CP

Wait until the terminal returns a complete test message. The message "HWI533 or HWI534" does not mean the test has completed!

SCPU Switch CPs

TEST CPU Test the standby (inactive) CP

Note: Testing the CPs can take up to 20 minutes for each test. When the test is complete, the memories are automatically synchronized.

Split the Cores

- 1 Be sure CP 0 is active and CP1 is standby. You may need to switch CPs again:

STAT CPU

**** exit program

- a. Verify that IODU/C 0 is active. You may need to switch IODU/Cs.

LD 137

STAT Get the status of IODU/C

SWAP Switch IODU/Cs if necessary

**** exit program

- 2 Connect a terminal to the CPSI port in Core/Net 1 to J25 of the I/O panel at the back of the Core/Net. Be sure it is configured as follows. The recommended baud rate is 9600, to be the same as the CPSI port.
7 data bits, 1 stop bit, Space parity, Full duplex, XON protocol
- 3 Place CP 0 in Maintenance by setting the MAINT/NORM switch to MAINT.
- 4 In Core/Net 1, disable the CNI cards by setting the ENB/DIS faceplate switches to DIS.

Install software on Core/Net 1

- 1 Place the CP Install disk that corresponds with the installed CP card type into the IODU/C in Core/Net 1.
- 2 Install the CD-ROM into the CD drive:

- a. press the button on the CD-ROM drive to open the CD-ROM disk holder
 - b. place the CD-ROM disk into the holder with the disk label showing
 - c. use the four tabs to secure the CD-ROM drive
 - d. press the button again to close the CD-ROM disk holder (don't push the holder in by hand)
- 3 In Core/Net 1, perform the following three steps in uninterrupted sequence:
 - a. press and hold the MAN RST button on the CP card
 - b. set the MAINT/NORM switch on the CP card to MAINT
 - c. release the MAN RST button

A sysload will begin (cold start). Wait for the Main Menu to appear on the terminal before proceeding.

Note 1: If the CD-ROM is not in the CD drive of the IODU/C, the installation procedure will not continue. Please insert the CD-ROM into the drive to continue.

Note 2: If a problem is detected during the system verification, Install stops, prints an error message, and aborts the installation. If the verification is not successful, do not continue; contact your technical support organization.

- 4 Press <CR> to continue.
- 5 Log into the system and enter the time and date, when prompted.
- 6 Initiate the database installation by selecting the following command from the menu:

<u> to Install menu
- 7 Remove the CP Install Program diskette and insert the Keycode diskette, when prompted.

<a> to continue with keycode validation

<y> to confirm that the keycode matches the CD-ROM release

- 8 When the Install Menu is displayed, select the following options

 to install software, database, CP-BOOT ROM, and IOP-ROM

<a> to verify that the CD-ROM is now in drive

The Installation Status Summary screen appears that lists the options to be installed.

<y> Yes, start Installation

<a> Continue with Upgrade

Pre-release 3 language groups

- 9 Select a PSDL file to install. The PSDL file contains the loadware for all downloadable cards in the system and loadware for M3900 series sets.

Select one of the six PSDL files

<1> Global 10 Languages

<2> Western Europe 10 Languages

<3> Eastern Europe 10 Languages

<4> North America 6 Languages

<5> Spare Group A

<6> North America 6 Languages (Duplicate of <4>)

The languages contained in each selection are outlined as follows:

- 1 - English, French, German, Spanish, Swedish, Italian, Norwegian, Brazilian Portuguese, Finnish, Japanese Katakana.
- * 2 - English, French, German, Spanish, Swedish, Norwegian, Danish, Finnish, Italian, Brazilian Portuguese.
- * 3 - English, French, German, Dutch, Polish, Czech, Hungarian, Russian, Latvian, Turkish.
- * 4 - English, Spanish, French, Brazilian Portuguese, Japanese Katakana, German.
- * 5 - English, French, German, Spanish, Swedish, Italian, Norwegian, Portuguese, Finnish, Japanese Katakana.
- * 6 - English, Spanish, French, Brazilian Portuguese, Japanese Katakana, German.

Release 3 language groups

- 10 Select a PSDL file to install. The PSDL file contains the loadware for all downloadable cards in the system and loadware for M3900 series sets.

Select one of the six PSDL files

- <1> Global 10 Languages
- <2> Western Europe 10 Languages
- <3> Eastern Europe 10 Languages
- <4> North America 6 Languages
- <5> Spare Group A
- <6> North America 6 Languages (Duplicate of <4>)

The languages contained in each selection are outlined as follows:

- 1 – Global 10 Languages (Release 3) English, French, German, Spanish, Swedish, Italian, Norwegian, Brazilian Portuguese, Finnish, Japanese Katakana.
- 2 – Western Europe 10 Languages (Release 3) English, French, German, Spanish, Swedish, Italian, Norwegian, Brazilian Portuguese, Finnish, Danish.
- 3 – Eastern Europe 10 Languages (Release 3) English, French, German, Dutch, Polish, Czech, Hungarian, Russian, Latvian, Turkish.
- 4 – North America six Languages (Release 3) English, French, German, Spanish, Brazilian Portuguese, Japanese Katakana.
- 5 – Spare Group A.
- 6 – Spare Group B.

- 11 Continue with ROM and IOP-ROM upgrade when prompted.

12 Select a database to install.

When the installation is complete, the Installation Status Summary table appears. Press <CR> to continue.

When the Install Menu appears, select:

<d> To install Database only

When the database installation screen appears, insert the first 2 MB database diskettes in the IODU/C.

<a> to install the customer database

<y> to start installation

Follow the instructions to install the database and update the ROM.

The Installation Status Summary screen appears. Verify that CD to disk, disk to ROM, Database, CP-BOOTROM, and IOP-ROM were installed.

<cr> press return to continue

<q> to quit (remove any diskettes from the floppy drive)

<y> Yes, to confirm quit

<a> to reboot the system

The system will automatically perform a sysload during which several messages will appear on the system terminal. Wait for "DONE" and then "INI" messages to be displayed before continuing.

If the system fails to load, or system messages indicate data corruption, back out of the parallel reload process by performing the steps in "Backing out of the parallel reload on Options 61C, 81, 81C" on page 46.

Check for peripheral software download

- 1 Load LD 22 and print Target peripheral software version. The Source peripheral software version was printed during the pre-conversion procedure. If there is a difference between the Source and Target peripheral software version, a forced download will occur during initialization when coming out of parallel reload. System initialization will take longer and established calls on IPE will be dropped.

LD 22

REQ

PRT

TYPE

PSWV

exit program

Switch call processing to Core/Net 1



CAUTION

Service Interruption

Call Processing will be interrupted! Perform these next steps carefully. This is the point at which your service is interrupted. Calls in process will be interrupted, especially if Peripheral Software Download takes place. Some calls may be dropped.

Perform the next four steps in succession. Call processing will be switched from Core/Net 0 to Core/Net 1.

- 1 In Core/Net 0, set the DIS/ENB faceplate switch on the IODU/C card to DIS.
- 2 In Core/Net 0, disable the CNI cards by setting the ENB/DIS faceplate switches to DIS.
- 3 In Core/Net 1, enable the CNI cards by setting the ENB/DIS faceplate to ENB.
- 4 In Core/Net 1, press the MAN INT button.

Note: Call processing is now switched from Core/Net 0 to Core/Net 1.

Test Core/Net 1

- 1 Test Call Processing. This includes, but is not limited to the following:
 - Check for dial tone.
 - Make internal, external, and network calls.
 - Check attendant console activity.
 - Check DID trunks.
 - Check any auxiliary processors.

Note: From this point forward you will be upgrading Core/Net 0 with new software.

Install software on Core/Net 0

- 1 Move the CPSI port cable from J25 on Core/Net 1 to J25 on Core/Net 0.
- 2 Set the IODU/C faceplate switch to ENB.
- 3 Insert the CP Install diskette into Core/Net 0.
- 4 Press the MAN RST button on the CP card in Core/Net 0 to reboot the system and start the Software Installation Tool. (The terminal displays SYSLOAD messages during file loading. When SYSLOAD is completed, the NT logo appears.)
- 5 When the NT logo appears, press <CR> to continue.
- 6 When the Main Menu appears, select the following options in sequence:
 - <u> to Install menu
- 7 Remove the CP Install Program diskette and insert the Keycode diskette. Select the following when prompted:
 - <a> to continue with keycode validation
 - <y> to confirm that the keycode matches the CD-ROM release

- 8 When the Install Menu appears, select the following options in sequence to copy the software from Core/Net 1 to Core/Net 0, install CP-software, ROMs, and transfer the database to the redundant disk:

<o> to copy system software from the other core
<a> to copy /p partition from Core1 to Core 0
<a> to continue with upgrade

When the software has copied successfully, you must install CP-software from the hard disk to Flash EEPROM, and install CP-BOOT ROM.

<CR> press <CR> when you are ready to continue
<y> to start installation
<a> to continue with ROM upgrade
<y> to start installation
<a> to continue with ROM upgrade.

When the installation is complete, the Installation Status Summary screen appears.

<CR> to return to the Install Menu

When the Install Menu appears, install IOP-ROM:

<f> to install IOP-ROM only

When the Installation Status Summary screen appears:

<y> to start installation
<y> to continue installing IOP-ROM
<a> to continue with ROM upgrade

When the installation is complete, the Installation Status Summary screen appears.

<CR> to return to the Install Menu

When the Install Menu appears, install the database:

<d> to install database only
<d> to copy database from the redundant disk

When the Installation Status Summary screen appears:

<y> to start installation
<a> to continue transferring the database from the redundant disk

When the Installation Status Summary screen appears, press:

<CR> to return to the Install Menu

When the Install Menu appears, remove any diskettes in the floppy before rebooting the system:

- <q> to quit
- <y> to confirm quit
- <a> to reboot the system

Wait for "DONE" and then "INI" messages to be displayed before continuing.

Exiting split mode

- 1 Connect CPSI port or maintenance SDI port
- 2 Enable the CNI cards by setting the ENB/DIS faceplate switch to ENB in Core/Net 0.
- 3 Perform the following in uninterrupted sequence:
 - Press and release the MAN RST button in Core/Net 0.
 - When SYS700 messages appears on LCD display on Core/Net 0, set the MAINT/NORM switch to NORM in Core/Net 0.

In 60 seconds, the LCD will display and confirm your processes with:

RUNNING ROM OS

ENTERING CP VOTE

An HWI534 message indicates the start of memory synchronization. In 10 minutes, an HWI533 message on Core/Net 1 CSPI or SDI terminal indicates the memory synchronization is complete.

- 4 In Core/Net 1, set the MAINT/NORM switch on the CP card to NORM.

Test Core/Net 1 and Core/Net 0

- 1 Perform a redundancy sanity test using the following sequence:

LD 135

STAT CNI

Get status of CNI cards

STAT CPU

Get status of CPU and memory

TEST CPU

Test the inactive Core/Net

TEST CNI c s

Test each inactive CNI card

- 2 Switch Cores and test the other side (Core/Net 0)

SCPU

Switch cores

TEST CPU

Test the inactive Core/Net

TEST CNI c s

Test each inactive CNI card

Note: Testing the CP and CNI cards and synchronizing memory can take up to 20 minutes for each test. When the CP test is complete, the CP the memory is automatically synchronized.

- 3 Clear the display and minor alarms on both Cores.

CDSP

Clear the displays on the Cores

CMAJ

Clear major alarms

CMIN ALL

Clear minor alarms

- 4 Get the status of the Cores, CNIs, and memory.

STAT CPU

Get the status of both Cores

STAT CNI

Get the status of all configured
CNIs and memory

Note: You may need to execute the STAT CNI command twice before receiving a response from the system.

exit program

Synchronize the hard disks

- 1 Load LD 137 and synchronize the hard disks. Synchronization may take up to 50 minutes. To be sure that the contents of IODU/C 1 are copied to IODU/C 0, verify that IODU/C 0 is disabled.

LD 137

STAT	Get the status of the IODU/C and redundancy
SYNC	Enter "Yes" to synchronize disks. Wait until the memory synchronization successfully completes before continuing.
TEST CMDU	Performs hard and floppy disk test.

- 2 Get the status of the CMDU's and be sure CMDU 0 is active. Switch if necessary.

STAT	Get the status of IODU/C and redundancy
SWAP	Switch CMDU if necessary
STAT CMDU	Get the status of the IODU/Cs. Be sure the same IODU/C and CPU are active.
****	exit program

Perform a data dump

Load the Equipment Data Dump Program (LD 43). At the prompt, enter

LD 43 to load the program

- 1 When "EDD000" appears on the terminal, enter

EDD to begin the data dump

- 2 When "DATABASE BACKUP COMPLETE" or "DATADUMP COMPLETE" appears on the terminal, enter



CAUTION

Loss of Data

If the data dump is not successful, do not continue; contact your technical support organization. A data dump problem must be corrected before proceeding.

to exit the program

Backing out of the parallel reload on Options 61C, 81, 81C

- 1 Place the original Install disk 1 into the IODU/C in Core/Net 1.
- 2 In Core/Net 1, press the MAN RST button.
- 3 Select <u> to initiate the Install Tool.
- 4 Remove the CP Install diskette and insert the source keycode diskette.
- 5 Select <a> to continue with keycode validation.
- 6 When the install screen appears, select the following options in sequence, and insert the **source** database diskette when you are prompted to do so.
 - to install software, database, CP-BOOT ROM, and IOP-ROM
 - <a> to start installation
 - <a> continue with upgrade

- 7 When the database installation screen appears, select the following:
 <c> to transfer the previous system database (DBMT)
 (choose this option if the database was converted on-site)
 or
 <a> to install customer database (choose this option if the
 database was sent to Nortel Networks for conversion)
 <a> to continue with the database install
 <y> to delete the hardware infrastructure database files from
 the hard disk
- 8 When the ROM installation screen appears, select the following:
 <a> to continue with the ROM upgrade
- 9 Following the database installation, upgrade the ROMs:
 <a> to continue with ROM upgrade (CP-BOOT)
 <y> to start installation
 <a> to continue with ROM upgrade (IOP-ROM)
- 10 Remove the disk from the IODU/C in Core/Net 1.
- 11 From the main menu, select the following options to quit and reload the
 system:
 <q> to quit
 <y> to confirm quit
- 12 Remove any diskettes from the floppy drive, and type
 <a> to reboot the system
- 13 In Core/Net 1, perform the following steps:
 - enable the CNI cards by setting the ENB/DIS faceplate
 switches to ENB
 - press and release the MAN RST button on the CP card— When SYS700 messages appear on the CP 1 LCD display
 - set CP 1 MAINT/NORM switch to NORM.

Within 60 seconds, the LCD will display the following messages, confirming
the process.

RUNNING ROM OS ENTERING CP VOTE

An "HWI534" message from the CPSI or SDI port indicates the start of memory synchronization. Within 10 minutes, an "HWI533" message on Core/Net 0 CPSI or SDI TTY indicates the memory synchronization is complete. Wait until the memory synchronization is complete before continuing.

- 14 In Core/Net 0, set the MAINT/NORM switch on the CP card to NORM.
- 15 Perform a redundancy sanity test.

LD 135

TEST CPU	Test the standby (inactive) Core/Net.
SCPU	Switch the Cores.
CDSP	Clear display.
TEST CPU	Test the standby (inactive) Core/Net.
SCPU	Switch the Cores.

Note: Testing the CPs can take up to 20 minutes for each test. When the test is complete, the memories are automatically synchronized.

- 16 Load LD 137 and synchronize hard disks. Synchronization may take up to 50 minutes. To be sure the contents of CMDU 0 are copied to CMDU 1, use the STAT command to verify that CMDU 1 is disabled.

LD 137

STAT CMDU	Get the status of both CMDUs.
SYNC	Synchronize disks.
TEST CMDU	Performs hard and floppy disk test.

You are now out of the parallel reload process, and have returned to the Source software.

Option 51C software conversion

Use this procedure to convert from one software release to another on Option 51C systems only.

Verify memory

Determine whether your system requires additional memory. Refer to "Increasing NT9D19, NT5D10 CP and NT5D03 CP memory" on page 151 for memory requirements and upgrade procedures.